

Claims

B2  
A. 1. A tissue dissector comprising:  
2 an elongated cannula, having a proximal end and a distal end;  
3 a tip having tapered outer walls and being disposed on the distal end of the  
4 cannula for inserting into tissue; and  
5 a dilating element disposed on the cannula at a location thereon  
6 intermediate the distal and proximal ends thereof and having an  
7 outer dimension greater than the dimension of the distal end of the  
8 cannula for displacing tissue to form a surgical cavity therein.

1 2. The dissector of claim 1 in which the tip is transparent, and comprising:  
2 an endoscope disposed within the cannula, having a distal end positioned  
3 near the distal end of the cannula and having a proximal end  
4 coupled to the proximal end of the cannula, the distal end of the  
5 endoscope being positioned near the tip for providing a field of  
6 view through the tip.

1 3. The dissector of claim 1 in which the dilating element is substantially of oval  
2 shape.

Sub C 1 4. The dissector of claim 1 wherein the cannula further comprises:  
2 a locking mechanism, positioned near the distal end of the cannula at a  
3 location recessed from the tip disposed on the distal end of the  
4 cannula; and the dilating element further comprises a mating lock

5 to mate with the locking mechanism for positioning the dilating  
6 element on the cannula at a location thereon recessed from the  
7 distal end thereof.

1 5. The dissector of claim 2 wherein a spacer length is disposed intermediate the tip  
2 and the dilating element having an outer dimension less than the outer dimension of the  
3 dilating element, for positioning the dilating element within an angle of the tapered outer  
4 walls of the tip to permit contact of the outer walls of the tip with a target vessel.

1 6. The dissector of claim 4 in which the locking mechanism further comprises a  
2 length of screw threads positioned on the surface of the cannula, and the mating lock of  
3 the dilating element further comprises a threaded bore hole for fixably coupling the  
4 dilating element to the length of screw threads.

1 7. The dissector of claim 4 in which the locking mechanism further comprises at  
2 least one protuberance and the mating lock of the dilating element further comprises a  
3 mating slot for fixably coupling the dilating element to the protuberance.

1 8. The dissector of claim 4 for operation with selected ones of a population of  
2 dilating elements of differing maximum dimensions for enlarging a surgical cavity to  
3 differing dimensions.

1 9. The dissector of claim 1, in which the dilating element is expansively resilient.

1 10. The dissector of claim 1 in which the dilating element is expansively resilient, and  
2 comprising:

3 a sheath slidably positioned on the cannula, and having a distal end  
4 disposed upon the dilating element in a first position and recessed  
5 from the dilating element in a second position, for reducing the  
6 outer dimension of the dilating element responsive to being in the  
7 first position and for allowing the expansion of the outer dimension  
8 of the dilating element responsive to being in the second position.

1 11. The dissector of claim 1 in which the tip and the dilating element form a single  
2 unit and a proximal end of the unit is configured to mate to the distal end of the cannula.

1 12. A method for enlarging a surgical cavity about a target vessel, using a tissue  
2 dissector having a portion thereof of expanded dimension and having a transparent tip  
3 with tapered outer walls positioned at the distal end of the tissue dissector, the method  
4 comprising:  
5 incising skin;  
6 dissecting within the incision to expose a surface of the target vessel;  
7 positioning a tapered outer wall of the transparent tip of the tissue  
8 dissector on the surface of the vessel;  
9 advancing the tissue dissection under endoscopic visualization through the  
10 transparent tip; and  
11 simultaneously expanding the surgical cavity in a lateral direction  
12 responsive to the portion of the tissue dissector of expanded  
13 dimension, as the tissue dissector is advanced.

1 13. The method of claim 12 comprising:  
2 removing the tissue dissector from the expanded surgical cavity;  
3 increasing the dimension of the portion of the tissue dissector of expanded  
4 dimension; and  
5 re-inserting the tissue dissector into the surgical cavity for advancement  
6 therein to expand the dimension thereof in response to passage  
7 there through of the portion of the tissue dissector of increased  
8 dimension.

ADD  
B17  
Add c37